

REMARKS

Claims 1-25 and 27 were previously pending, of which claims 1, 5 and 27 have been amended. Claim 11 has been cancelled without prejudice or disclaimer. Reconsideration of presently pending claims 1-10, 12-25 and 27 is respectfully requested in light of the above amendments and the following remarks.

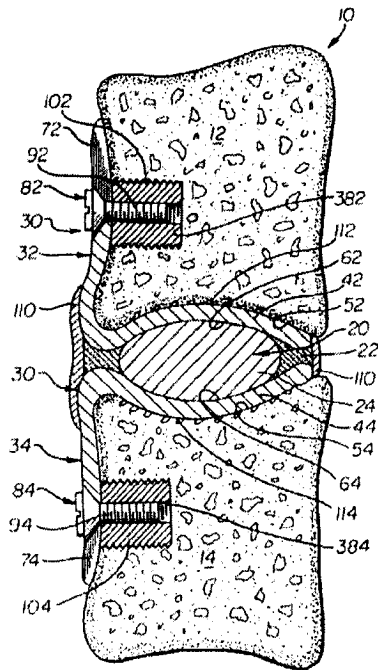
Rejections under 35 U.S.C. § 102

Claims 1-5, 7, 12, 15, 16, 19-21, 25 and 27 were rejected under 35 U.S.C. §102(b) as being anticipated by Bryan, et al. (US Patent No. 6,156,067 hereinafter referred to as “Bryan”). As set forth at MPEP §2131, it is well-established:

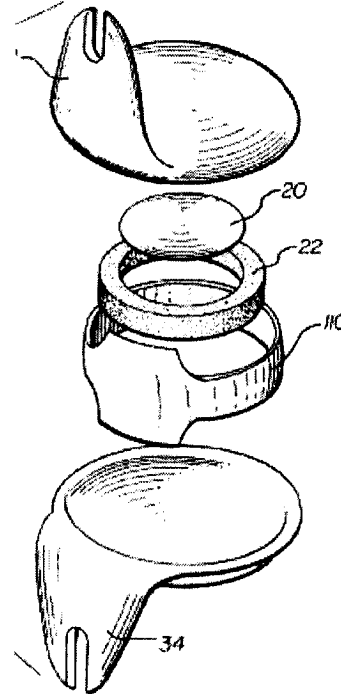
A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

With respect to the claims as herein amended, this rejection is respectfully traversed.

Claim 1 requires " a motion-controlling member extending between the first and second recessed surfaces, *wherein the articulation member is stiffer than the motion-controlling member*". The Office action states that Bryan discloses “an articulation member (outer periphery of element 20) positioned entirely between the two plates; and a motion-controlling member (22, 24) extending between the first and second recessed surfaces (see Figure 3).” (Office action, p. 2). However, according to the specification of Bryan, a disclosed embodiment of element 20 is an articulation member defined as a resilient disc body with a supple center portion 24, while a disclosed embodiment of motion-controlling element 22 is defined as a relatively stiff annular gasket. (Col. 4, lines 2-5, see also Figs. 3 and 4 below). In addition, the motion-controlling element 22 is disclosed, in an example, with a durometer hardness range of approximately 70-90. (Col. 4, lines 5-10). The articulation member 20 is softer, being made, in an example, from an elastomeric polymer of approximately 30 durometer hardness. (Col. 4, lines 5-10).

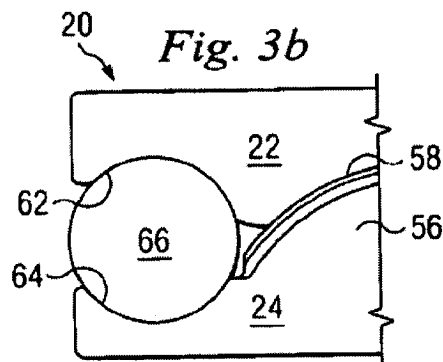


Bryan Fig. 3



Bryan Fig. 4

Applicants' specification and drawings disclose an articulating member 56 that is representatively a part of a rigid plate 24, where motion-controlling member 66 is *more* elastic than the articulating member 56. (Applicants' paragraphs [0019] and [0025], and Fig. 3b).



Applicants' Fig. 3b

Thus, Bryan does not disclose the limitation “*wherein the articulation member is stiffer than the motion-controlling member*” as required by Applicants’ claim 1.

Therefore, it is respectfully submitted that the §102(b) rejection of claim 1 is not supported by the reference, and should be withdrawn. Claims 2-4 should be allowable since they depend from and further limit Claim 1. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of claims 1-4.

Claim 5 requires “an articulation member *made from a first material and* positioned entirely between the two plates; and an elastic motion-controlling member *made from a second material and* positioned between the first and second recessed surfaces, *the second material being more elastic than the first material.*”

As described above, Bryan does not disclose all the limitations required by Applicants’ claim 5. Therefore, it is respectfully submitted that the §102(b) rejection of claim 5 is not supported by the reference, and should be withdrawn. Claims 7, 12, 15, 16, 19-21 and 25 should be allowable since they depend from and further limit claim 5. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of claims 5, 7, 12, 15, 16, 19-21 and 25.

Claim 27 requires:

An implant comprising:

a first plate for engaging with a first bone comprising a superior surface and an inferior surface, the superior surface having a recessed surface portion adjacent to a convex articulation surface portion;

a second plate for engaging with a second bone comprising a superior surface and an inferior surface, the inferior surface

having a concave articulation surface portion in articulating engagement with the convex articulation surface portion; and
a motion-controlling member positioned between the recessed surface portion and the inferior surface of the second plate.

Bryan discloses first and second plates 32, 34 as representatively shown in Figs. 3 and 4 above. The first and second plates 32, 34 have “[c]orrespondingly inner concave surfaces 62, 64 in confronting array [which] retain the resilient body 20 in...position.” (Col. 4, lines 20-22). Therefore, the disclosure of Bryan does not cover the limitation of claim 27 that “a first plate for engaging with a first bone comprising a superior surface and an inferior surface, *the superior surface having a recessed surface portion adjacent to a convex articulation surface portion.*”

In addition, the first and second plates 32, 34 are effectively separated from each other by the resilient disc body 20, which includes central portion 24. (Col. 4, lines 2-5, 20-22; Fig. 3 and 4). In the Advisory Action dated August 20, 2007, it is stated that “...the plates are considered to be in engagement with one another as they are connected through element 24 in the Bryan reference [and] the claim language [of claim 27] does not specify that the plates must be touching directly.” (Advisory Action, Continuation of 11 on Continuation Sheet). Thus, the Advisory Action’s definition of “engagement” includes two elements that are not touching but are connected through a third element which prevents the first two elements from contacting each other.

However, Bryan defines the like-term “engaging” to mean two elements which are in contact with one another. This is shown above in Fig. 3, and used in the specification where “each leg 42, 44 has an outer convex surface 52, 54 for *engaging* the adjacent bone of the natural vertebral bodies 12, 14.” (Bryan Fig. 3; Col. 4, lines 17-20). Bryan’s usage of the term is consistent with its plain meaning and Applicants’ usage. Applicants state in paragraph [0015] that “the device 20 includes a first plate 22 for engaging with the first (e.g., superior) vertebrae 14 and a second plate 24 for engaging with the second (e.g., inferior) vertebrae 16.” Claim 27

uses this plain meaning and requires “[an] inferior surface having a concave articulation surface portion *in articulating engagement* with the convex articulation surface portion.”

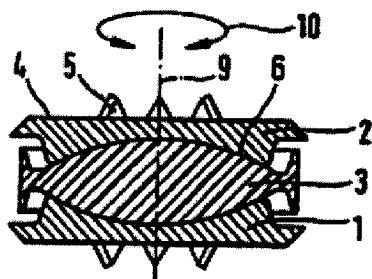
It is urged by Applicants that the plain meaning of the terms “engagement” and “engaging” as used by Applicants and by Bryan should be used to evaluate claim 27 rather than the apparent definition of “engaging” used in the Advisory Action – that being two elements that are not touching, but that are connected through a third element.

Hence, the disclosure of Bryan does not cover the limitation of claim 27 that “a second plate for engaging with a second bone comprising a superior surface and an inferior surface, the inferior surface having a concave articulation surface portion in articulating engagement with the convex articulation surface portion [which is part of the first plate].”

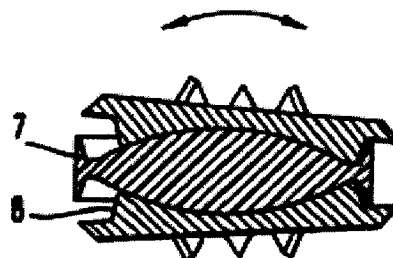
Thus, Bryan does not disclose all the limitations required by Applicants’ claim 27. Therefore, it is respectfully submitted that the §102(b) rejection of claim 27 is not supported by the reference, and should be withdrawn.

Claims 1-3, 5, 6, 7, 10, 15, 16, 22 and 24 were rejected under 35 U.S.C. §102(b) as being anticipated by Buttner-Janz, et al. (US Patent No. 5,401,269 hereinafter referred to as “Buttner-Janz”). The Office action states that Buttner-Janz discloses “an articulation member (3) positioned entirely between the two plates (see Figures 1-15); and a motion-controlling member (outer periphery of element 10; 7, 8) extending between the first and second recessed surfaces.” (Office action, p. 4).

According to the specification of Buttner-Janz, element 3 is an articulating prosthesis core that has an integral peripheral collar 7. (Col. 3, lines 3-20; Figs. 1 and 2 reproduced below).



Buttner-Janz Fig. 1



Buttner-Janz Fig. 2

The prosthesis core 3 (including collar 7) is disclosed as being made of the same material, high density polyethylene. (Col. 3, lines 3-4). Thus, Buttner-Janz does not disclose the limitation "*wherein the articulation member is stiffer than the motion-controlling member*" as required by Applicants' claim 1. Neither does Buttner-Janz disclose the limitation "an articulation member *made from a first material and* positioned entirely between the two plates; and an elastic motion-controlling member *made from a second material and* positioned between the first and second recessed surfaces, *the second material being more elastic than the first material*" as required by Applicants' claim 5.

Therefore, it is respectfully submitted that the §102(b) rejection of claim 1 and claim 5 is not supported by the reference, and should be withdrawn. Claims 2-3, 6, 7, 10, 15, 16, 22 and 24 should be allowable since they depend from and further limit claims 1 and 5. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of claims 1-3, 5, 6, 7, 10, 15, 16, 22 and 24.

Rejections Under 35 U.S.C. §103

Claim 8 was rejected under 35 U.S.C. §103 as being unpatentable over Bryan or Buttner-Janz in view of Rogozinski (US Patent No. 5,888,226 hereinafter referred to as “Rogozinski”). This rejection is respectfully traversed.

As stated above, neither Bryan nor Buttner-Janz teach all of the limitations of independent claim 5 from which claim 8 further depends, and neither does the combination of Bryan or Buttner-Janz with Rogozinski cure this deficiency, such reference having been cited by the Examiner solely for its alleged teaching with respect to using a non-elastic ball and socket (Rogozinski). Claim 9 was rejected under 35 U.S.C. §103 as being unpatentable over Bryan or Buttner-Janz in view of Berry (US Patent No. 5,895,428 hereinafter referred to as “Berry”). This rejection is respectfully traversed.

As stated above, neither Bryan nor Buttner-Janz teach all of the limitations of independent claim 5 from which claim 9 further depends, and neither does the combination of Bryan or Buttner-Janz with Berry cure this deficiency, such reference having been cited by the Examiner solely for its alleged teaching with respect to using an amorphous oxide coating on the implant’s plates (Berry).

Claim 11 was rejected under 35 U.S.C. §103 as being unpatentable over Bryan or Buttner-Janz in view of McDaniel, et al. (US Patent No. 4,454,612 hereinafter referred to as “McDaniel”). However, claim 11 has been cancelled without prejudice or disclaimer.

Claim 13 was rejected under 35 U.S.C. §103 as being unpatentable over Bryan in view of Xavier (US Patent No. 6,063,121 hereinafter referred to as “Xavier”). This rejection is respectfully traversed.

As stated above, Bryan does not teach all of the limitations of independent claim 5 from which claim 13 further depends, and neither does the combination of Bryan with Xavier cure this

deficiency, such reference having been cited by the Examiner solely for its alleged teaching with respect to using a cord with the motion-controlling members (Xavier).

Claim 14 was rejected under 35 U.S.C. §103 as being unpatentable over Bryan in view of Michelson (US Patent No. 6,350,283 hereinafter referred to as “Michelson”). This rejection is respectfully traversed.

As stated above, Bryan does not teach all of the limitations of independent claim 5 from which claim 14 further depends, and neither does the combination of Bryan with Michelson cure this deficiency, such reference having been cited by the Examiner solely for its alleged teaching with respect to using a bio-resorbable material on the elastic members (Michelson).

Claim 17 was rejected under 35 U.S.C. §103 as being unpatentable over Bryan in view of Rabbe, et al. (US Patent No. 5,776,197 hereinafter referred to as “Rabbe”). This rejection is respectfully traversed.

As stated above, Bryan does not teach all of the limitations of independent claim 5 from which claim 17 further depends, and neither does the combination of Bryan with Rabbe cure this deficiency, such reference having been cited by the Examiner solely for its alleged teaching with respect to having hollow portions in the implant (Rabbe).

Claim 18 was rejected under 35 U.S.C. §103 as being unpatentable over Bryan in view of Ray, et al. (US Patent No. 4,772,287 hereinafter referred to as “Ray”). This rejection is respectfully traversed.

As stated above, Bryan does not teach all of the limitations of independent claim 5 from which claim 18 further depends, and neither does the combination of Bryan with Ray cure this deficiency, such reference having been cited by the Examiner solely for its alleged teaching with respect to using gel in the elastic members (Ray).

Claim 23 was rejected under 35 U.S.C. §103 as being unpatentable over Buttner-Janz in view of Hochshuler, et al. (US Patent No. 6,576,016 hereinafter referred to as “Hochshuler”). This rejection is respectfully traversed.

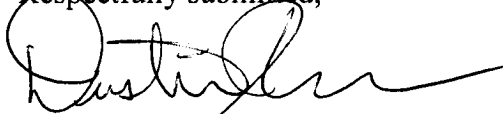
As stated above, Buttner-Janz does not teach all of the limitations of independent claim 5 from which claim 23 further depends, and neither does the combination of Buttner-Janz with Hochshuler cure this deficiency, such reference having been cited by the Examiner solely for its alleged teaching with respect to arranging the plurality of recesses in a circular dove-tail shape (Hochshuler).

For the foregoing reasons, it is respectfully requested that the Examiner withdraw the 35 U.S.C. §103 rejections of claims 8, 9, 13, 14, 17, 18 and 23.

Conclusion

An early formal notice of allowance of claims 1-10, 12-25 and 27 is requested. The Examiner is invited to telephone the undersigned if further assistance is necessary. The Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 08-1394.

Respectfully submitted,



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